WHAT IS CLAIMED IS:

1. An on-demand service expanding system mounted to a system provided with a server supplying a variety of services including a connection service with a communication network, a number of clients each receiving said variety of services, a number of front-ends each interposed between said clients and said server and executing a part of service providing function involved in said server based on a demand from each of said clients, and service expanding equipment containing internally a communication base, comprising:

said on-demand service expanding system containing at least one service broker residing on each communication device being a component of the communication network, and at least one broker controller residing on each computer for supplying a variety of services;

said service broker being provided with a means for selecting a front-end that matches with a demand of service transmitted from a client and a front-end connected with said client to transmit contents of the demand of service with respect to the front-end; and

said broker controller being provided with a means for controlling the front-end selected so as to connect the same with said server, and a means for controlling said server connected by means of the former control means, said front-end, and the service broker from which said contents of the demand of service was transmitted for a period of time during provision of the service.

2. An on-demand service expanding system mounted to a system provided with each front-end interposed between a server for supplying a variety of services and a client by which the variety of services are to be received, and a service expanding system for providing services by the use of said front-end, said services being implemented by an entrepreneur existing on computers in a communication network composed of communication devices and the computers and for providing the variety of services with respect to customers by the use of said communication network (hereinafter referred to simply as "entrepreneur"), said front-end executing a part of functions for processing data of the server on a communication device acting therefor, comprising:

service brokers and broker controllers;

each service broker being provided with:

a means for transferring a demand for using a service implemented to each front-end that corresponds to the one transmitted from each client and each front-end to a pertinent front-end,

a means for transmitting a demand for controlling the front-end to said broker controller,

a means for administering front-end information being information as to a front-end in a communication device on which the service broker oneself resides and containing information of an interface mounted to a front-end for connecting a client, the server, and the service broker with the front-end, a name of service implemented to the front-end, and information of the

communication device on which the front-end resides, and

a means for providing an interface by which a group of said respective means are used from the broker controller, the front-ends, and the clients (hereinafter referred to as "service broker functional interface"); and

said broker controller residing on a computer that supplies services and being provided with:

a means for administering a program included on each front-end or the server,

a means for controlling each front-end operated on each communication device,

a means for controlling the server operated on each computer,

a means for controlling the service broker residing on each communication device;

a means for administering service administering information, and

a means for providing an interface by which a group of said means are used from the service brokers, the server, and the entrepreneurs;

said service administering information containing an identifier allocated by each broker controller oneself so as to be alone in the broker controller oneself in order that a program is discriminated by the broker controller oneself, a name of service that can be realized by using programs in the server and each front-end, program information being information as to the programs including the server and each front-end, information of an interface for connecting each

front-end and each broker controller oneself with the server, server information involving a name of service implemented to the server and being information as to the server installed by each entrepreneur, information of the service broker functional interface for connecting each broker controller oneself with a service broker residing on each communication device, information of a communication device on which each service broker resides, and a system information involving an interface for using a control function of each front-end provided by said service expanding system and being information as to the on-demand service expanding system oneself.

3. An on-demand service expanding system as claimed in claim 2, wherein when a front-end providing a service that is requested by a client to use the same does not reside on a communication device in the nearest service broker with which the client has been connected, said service broker transmits a distribution of and a demand for starting up the front-end in question to said broker controller, whereby a connecting point of client with service is distributed in an on-demand manner to the nearest communication device.

4. A service providing system of a service-contents preliminary delivery type applied to the on-demand service expanding system as claimed in claim 2, comprising:

said client, said front-end, said server, said service-expanding system, and said on-demand service expanding system;

said server being provided with a service forecasting means

for extracting service contents that are forecasted to be used by said client; and

said front-end being provided with a means for receiving from the server service contents that are forecasted to be used by a client and maintaining the same to provide the service contents received with respect to the client in question.

5. A service providing system of a service-contents preliminary delivery type as claimed in claim 4, comprising:

a means wherein the service broker transmits such a demand that the server extracts service contents that are forecasted to be used by a client in a parallel manner during a period of time in which the client checks or establishes newly a front-end to be connected with the client at the time when the client connected with the service broker, and transfers the service contents extracted to the front-end in question with respect to the server from which a service to be received by the client is supplied through the broker controller, whereby the service contents that are forecasted to be used by the client have been already present in the front-end in question at the time when the client transmits a demand for use of service to the front-end in question.

6. A service providing system of a service-contents preliminary delivery type as claimed in claim 4 or 5, wherein:

said service-forecasting means involves a means for maintaining an access history with respect to Web pages by a client, and forecasting a service, which will be used by the

client from the history.

7. A service providing system of a service-contents preliminary delivery type as claimed in claim 4 or 5, wherein: said service forecasting means involves a means for selecting e-mails that have been addressed to the client based on an identifier delivered from said broker controller.

8. A method for providing services involving a communication network provider, service providers, and customers, comprising:

said communication network provider constructing and operating a communication network by the use of communication equipment and computers in which the on-demand service expanding system as claimed in claim 2 or the service providing system of a service-contents preliminary delivery type as claimed in any one of claims 3 through 7 has been installed to provide a connection service with the communication network operated by the communication network provider oneself with respect to the customers, whereby an environment making possible to provide services to the customers by the use of the on-demand service expanding system residing on the communication network constructed by the communication network provider oneself (hereinafter referred to as "service providing environment") is supplied to a plurality of the service providers, so that use fees for the service providing environment in response to use fees for resources of the communication equipment in addition to communication fees for the communication network operated by

the communication network provider oneself are collected from the plurality of service providers; and

said service providers constructing servers and front-ends in which services to be provided to customers have been installed in the service providing environment supplied from said communication network provider to distribute clients to the customers thereby to provide services with respect to the customers, and determining use fees of a service to be supplied to the customers from the service providers themselves with taking fees to be paid to the communication network provider into consideration, and collecting the fees determined from each customer who makes an agreement with the service providers in use of services.

9. A storage medium, comprising:

a program by which the on-demand service expanding system as claimed in any one of claims 1 through 3 or a service providing system of a service-contents preliminary delivery type as claimed in any one of claims 4 through 8 is realized as a result of installing the program in computers or communication devices contained in a communication network being stored in said storage medium.